

Amendments to the Claims

This listing will replace all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently amended) A process for the preparation of an olefin homopolymer or copolymer comprising polymerising at least one C<sub>2-20</sub>- $\alpha$ -olefin in slurry phase in the presence of:
  - (a) a metallocene compound of formula I:



wherein:

~~Cp is an optionally substituted and/or optionally fused homo- or heterocyclopentadienyl homocyclopentadienyl ligand;~~

~~Cp'' is a cyclopentadienyl substituted by at least one C<sub>1-20</sub>-alkyl group;~~

~~R is a bridge of 1-7 bridging atoms;~~

~~M is a group 4 to 6 transition metal Hf;~~

~~each X is -CH<sub>2</sub>-Y, wherein Y is at least one selected from the group consisting of: C<sub>6-20</sub>-aryl, C<sub>6-20</sub>-heteroaryl, C<sub>1-20</sub>-alkoxy, C<sub>6-20</sub>-aryloxy, -NR'<sub>2</sub>, -SR', -PR'<sub>3</sub>, -SiR'<sub>3</sub>, -OSiR'<sub>3</sub>, and halogen;~~

~~R' is C<sub>1-20</sub>-hydrocarbyl or in case of -NR'<sub>2</sub>, the two substituents R' can form a ring together with the nitrogen atom wherein they are attached to;~~

~~and each non-cyclopentadienyl ring moiety can further be substituted; and~~

~~n is 0 or 1; and~~

- (b) an aluminoxane.

2. (Cancelled)

3. (Currently amended) A process as claimed in claim 1, wherein Cp is optionally substituted by ~~at least one substituent selected from the group consisting of:~~ halogen, C<sub>1-20</sub>-alkyl, C<sub>2-20</sub>-alkenyl, C<sub>2-20</sub>-alkynyl, C<sub>3-12</sub>-cycloalkyl, C<sub>6-20</sub>-aryl or C<sub>7-20</sub>-arylalkyl, C<sub>3-12</sub>-heterocycloalkyl which contains 1, 2, 3 or 4 heteroatom(s) in the ring moiety, C<sub>5-20</sub>-heteroaryl, C<sub>1-20</sub>-haloalkyl, -SiR"<sub>3</sub>, -OSiR"<sub>3</sub>, -SR", -PR"<sub>2</sub> and or -NR"<sub>2</sub>.

4. (Currently amended) A process as claimed in claim 1, wherein Cp denotes optionally substituted by ~~at least one substituent selected from the group consisting of:~~ cyclopentadienyl, indenyl, tetrahydroindenyl, benzindenyl or fluorenyl.

5. (Original) A process as claimed in claim 4 wherein Cp denotes optionally substituted cyclopentadienyl.

6. (Previously presented) A process as claimed in claim 1 wherein the Cp and Cp" groups are identical.

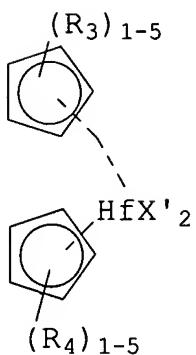
7. (Previously presented) A process as claimed in claim 2, wherein the Cp and Cp" groups carry 1 to 5 C<sub>1-6</sub>-alkyl substituents.

8. (Canceled)

9. (Previously presented) A process as claimed in claim 1 wherein -CH<sub>2</sub>-Y is benzyl or -CH<sub>2</sub>-SiR'<sub>3</sub>.

10. (Currently amended) A process as claimed in ~~claims~~ claim 1 wherein said metallocene is of formula (II)

(II)



wherein  $R_3$  is a  $C_{1-6}$ -alkyl or siloxy substituent,  $R_4$  is a  $C_{1-6}$ -alkyl, and both  $X'$  groups are either benzyl (Bz) or  $CH_2SiR'_3$  wherein  $R'$  is  $C_{1-20}$ -hydrocarbyl.

11. (Currently amended) A process as claimed in claim 1 wherein said slurry phase process is carried out in a loop reactor.

12. (Currently amended) A process as claimed in claim 1 wherein said slurry phase polymerisation is one stage of a multistage polymerisation.

13. (Currently amended) A process as claimed in claim 12 wherein subsequent to said slurry phase polymerisation there is a gas phase polymerisation.

14. (Original) A process as claimed in claim 13 wherein the weight ratio of produced polymer in the slurry phase: gas phase is 60:40 to 40:60.

15. (Canceled)

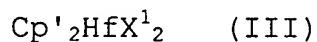
16. (Original) A process as claimed in claim 13 wherein said gas phase polymerization is itself followed by a further gas phase polymerisation stage.

17. (Previously presented) A process as claimed in claim 1 wherein the metallocene is prepolymerised.

18. (Previously presented) A process as claimed in claim 1, wherein said olefin homopolymer or copolymer is an ethylene homopolymer or ethylene copolymer with a C<sub>3-6</sub>-comonomer.

19. (Previously presented) A process as claimed in claim 1, wherein said metallocene is supported on a carrier.

20. (Currently amended) ~~A metallocene compound~~ Metallocene compounds of formula (III)



wherein each Cp' denotes a mono or di C<sub>1-6</sub>-alkyl-substituted cyclopentadienyl, X<sup>1</sup> is benzyl or CH<sub>2</sub>SiR'<sub>3</sub> in which R' is C<sub>1-20</sub>-hydrocarbyl.

21. (Currently amended) The A metallocene compound as claimed in claim 20 wherein R' is methyl.

22. (Currently amended) A metallocene compound selected from the group consisting of:

bis(n-butylcyclopentadienyl)Hf dibenzyl,  
bis(methylcyclopentadienyl)Hf dibenzyl,  
bis(1,2-dimethylcyclopentadienyl)Hf dibenzyl,  
bis(n-butylindenyl) Hf dibenzyl,  
bis(methylindenyl) Hf dibenzyl,

bis(dimethylindenyl) Hf dibenzyl,  
bis(n-propylcyclopentadienyl)Hf dibenzyl,  
bis(i-propylcyclopentadienyl)Hf dibenzyl,  
bis(n-butylcyclopentadienyl) Hf  $(CH_2SiMe_3)_2$ ,  
bis(n-propylcyclopentadienyl) Hf  $(CH_2SiMe_3)_2$ , and  
bis(i-propylcyclopentadienyl) Hf  $(CH_2SiMe_3)_2$ , ~~and mixtures~~  
~~thereof.~~

23. (Canceled)

24. (New) A metallocene compound as claimed in claim 5 wherein  
Cp is indenyl.